

REMARKS

Claim 14-26 have been rejected in the subject patent application. Claim 22 has been canceled as it is being incorporated into claim 14. New claims 27 and 28 are being added. Therefore, claims 14-21 and 23-28 will be pending after entry of this amendment.

Because there will be less than 20 total claims and less than three independent claims in this application after this amendment, no additional fee is required. However any fee that may be due in this application should be charged to Deposit Account 17-0055.

Objection to the Claims

An objection was made to claim 22 in that it was allegedly unclear whether the “plurality of display modules” included the display module recited in claim 14. The cancellation of claim 22 renders this objection moot.

The amendment of claim 1 adds the subject matter of claim 22. In doing so the related phrase from claim 22 now reads “to transmit a broadcast signal to the display module and a plurality of other display modules”. “The display module” refers to the display module introduced previously in claim 1. This phrase does not lack the clarity of as in the original language of claim 22.

Rejection Under 35 U.S.C. §103

Claims 14,15, 17 and 22-25 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent Application Publication 2001/0040509 to Dungan.

Amended Claim 1 now specifies that when a gas concentration exceeding the threshold level is detected, the sensor module transmits a broadcast signal to the display

module and a plurality of other display modules. In this situation all the nearby display modules receive that warning thereby providing a wide range alert, see present application page 8, third paragraph.

The rejection of claim 22 (now part of claim 1) cited Dungan as describing how a sensor module transmits the detected gas level to one or more central master controllers. Figure 1 in that reference shows a plurality of sensor modules 14a-d transmitting their gas levels via separate radio signals 16a-d to a central master controller 18. However, none of those sensor modules has a receiver for the radio signals from the other sensor modules and thus the display at each sensor modules does not receive signals from another sensor module. Therefore, the Dungan patent does not suggest the signal transmission stated in the last five lines of claim 14.

Regarding dependent claim 23, the rejection cited paragraph 0113 in Dungan as disclosing this subject matter. That passage merely describes each sensor sending a signal to the master station, when a particular concentration of the selected gas is detected. This is significantly different from claim 23 that specifies the transmission of a broadcast signal which can be received by multiple display modules.

For these reasons, claims 14,15, 17 and 22-25 are patentable under 35 U.S.C. §103

Claim 16 was rejected under 35 U.S.C. §103 as being unpatentable over Dungan in view of Lovejoy *et al.*

As noted above, the Dungan does not suggest transmitting a broadcast signal to the display module and a plurality of other display modules when a threshold gas concentration is exceeded. That patent teaches the sensors sending gas concentration readings to one or

more central master controllers, which do not perform sensing. A sensor module does not receive a warning broadcast signal from another sensor module.

Lovejoy *et al.* likewise merely sends signals from the sensor unit 10 to a central computer 140, but not directly to other sensor modules (see Figure 3). Therefore the additional disclosure from this patent does not cure the teaching deficiency in Dugan.

As a result, the combined teachings of Dugan and Lovejoy *et al.* do not render claim 16 obvious under 35 U.S.C. §103.

Claims 18, 19 and 22-24 stand rejected under 35 U.S.C. §103 as being unpatentable over Dugan in view of Lovegreen *et al.*

Dugan fails to suggest transmitting a broadcast signal to the display module and a plurality of other display modules when a threshold gas concentration is exceeded. Lovegreen *et al.* relates to a battery charger and does not mention a gas monitoring apparatus. As a consequence, their combined teachings do not suggest the fundamental concept in base claim 14 of a sensor module transmitting a broadcast signal to multiple display modules.

As a result, claims 18, 19 and 22-24 are patentable under 35 U.S.C. §103.

Claims 20-24 stand rejected under 35 U.S.C. §103 as being unpatentable over Dugan in view of Lovegreen *et al.* and further in view of Saaski *et al.*

As noted immediately above, Dugan and Lovegreen *et al.* fail to teach the basic concept of a sensor module transmitting a broadcast signal to multiple display modules when the detected gas concentration exceeds a define threshold. Saaski *et al.* teaches a rechargeable hearing aid and thus does not teach the specific broadcast signal transmission

for a gas sensor that is lacking in the other references. Therefore, the combination of these three references does not render the claimed subject matter obvious under 35 U.S.C. §103.

Claim 26 was rejected under 35 U.S.C. §103 as being unpatentable over Dungan in view of Kitaguchi *et al.*

Here too, the failure of Dungan to teach the basic concept of a sensor module transmitting a broadcast signal to multiple display modules when the detected gas concentration exceeds a define threshold is not cured by the teaching in Kitaguchi *et al.*

Claim 1 of Kitaguchi *et al.* cited in the rejection states that a radiation dose meter sends its data to a central station that processes that data to determine if a hazardous condition exists. If so, the central station transmits warning to a user. Thus unlike the presently claimed gas monitoring apparatus, the central station, not the sensor module, determines when a threshold level is exceeded. In addition, just like Dungan, the Kitaguchi *et al.* sensor module only communicates with the central station and does not transmit a broadcast signal directly to a plurality of other display modules.

For these reasons, the combined teachings of Dungan and Kitaguchi *et al.* do not render the subject matter of 26 obvious under 35 U.S.C. §103.

New Claims

Claims 27 and 28 relate to the broadcast signal that is transmitted when a sensor module detects a gas concentration that exceeds a threshold level. This subject matter is described in the third paragraph on page 8 of the application. Because as noted above Dungan does not suggest transmitting such warning signals to other display modules, these new claims are patentable.

Conclusion

In view of these distinctions between the subject matter of the present claims and teachings of the cited references, reconsideration and allowance of the present application are requested.

Respectfully submitted,
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